REMARKS

Claims 1-25 are now pending. Claims 1-21 stand rejected. Claims 22-25 have been added. Support for the claim amendments above and for the new claims is found, *e.g.*, on page 12 of applicants' disclosure, which discusses crystallizing a patterned silicon film by heating the patterned film to a temperature between 800°C and 1100°C. Applicants ask the office to reconsider the rejections and to allow all of the claims.

Claims 1-21 are rejected under 35 U.S.C. § 103(a) as being obvious over Nakajima in view of Gibson. This application claims priority from Japanese application 7-216608, filed on August 2, 1995, which precedes Nakajima's U.S. filing date of September 8, 1995. A certified copy of the priority document was filed with the application. Applicants are preparing an English translation of the priority document to perfect their priority claim. Applicants will submit the translation as soon as it is complete. Nakajima therefore does not qualify as prior art under any provision of 35 U.S.C. § 102, and applicant asks the office to withdraw this rejection.

Claims 1-21 also are rejected under the judicially created doctrine of obviousness-type double patenting, as well as under 35 U.S.C. § 103(a), as being obvious over the teachings and the claims of U.S. Patents 5,403,772, 5,614,426, and 5,580,792. Each of these patents discloses a semiconductor fabrication

method in which the semiconductor film is patterned ***after*** it is crystallized. None of these patents even suggests, let alone describes, "patterning [the] semiconductor film" and then "crystallizing [the] ***patterned*** semiconductor film," as claimed in independent claims 1, 6, and 12 (emphasis added). Likewise, these patents do not teach or suggest "directing ions ... into a selected region" of the semiconductor film before crystallizing the film so that a "crystallization promoting material segregates in [the] selected region," as claimed in claim 21.

With respect to claims 1, 6, and 12, the distinction above is significant because crystallizing the semiconductor film after patterning provides more control over the amount of unwanted material that appears in the crystalline semiconductor film after etching. As described in applicants' disclosure, any unwanted crystallization promoting material that appears in the patterned film disperses to the peripheral portions of the pattern during crystallization. Most, if not all, of the unwanted material then is removed from the film during the etching process. (See page 12, line 22, through page 13, line 11.) When using the methods taught and claimed by the '772, '426, and '792 patents, the semiconductor manufacturer cannot control the dispersal of unwanted material during crystallization in this way. Therefore, the manufacturer could be left with large concentrations of unwanted material in the patterned film.

With respect to claim 21, directing inert ions, and therefore directing defects or stress, into a selected region of the semiconductor film causes the crystallization promoting material to congregate in that region during crystallization. Removing this region by etching then eliminates most of the crystallization promoting material from the semiconductor film, greatly reducing the concentration of this unwanted material in the film. Therefore, like the methods of claims 1, 6, and 12, the method of claim 21 provides more control over the removal of unwanted material from the semiconductor film.

Because the '772, '426, and '792 patents do not describe, suggest, or claim the claim features discussed above, all of the pending claims are patentably distinct over the claims and teachings of these patents. Therefore, applicants ask the office to withdraw these rejections. The new claims 22-25 are allowable for similar reasons.

In view of the above amendments and remarks, all of the claims should be in condition for allowance. A formal notice to that effect is respectfully solicited.

If there are any other charges, or any credits, please apply them to Deposit Account No. 06-1050.

Respectfully submitted,

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